

Appl. No. 09/644,390
Amdt. dated December 2, 2004
Reply to Office Action of September 10, 2004

ARGUMENTS/REMARKS

In the Office Action, claims 1-7 were rejected under 35 USC 102 as being anticipated by Siedentop (US 6,329,909), and claim 8 was rejected under 35 USC 103 as being unpatentable over Siedentop in view of Windyka (US 5,592,179) for reasons set forth in the Office Action. Reconsideration of these rejections is requested respectfully in view of the argument herein.

Claim 1 is amended, and claims 3-4 are amended to correspond to the amended claim 1, in order to emphasize the distinction between the present invention and the teachings of the cited art.

Upon study of the teachings of Siedentop, and Siedentop in view of Windyka, it appears that this art does not disclose the principle of the present invention wherein there is (1) the transmitting of a first coded electromagnetic signal (stimulus signal) from a control unit to a portable transmitter, and then (2) the transmitting of a second coded electromagnetic signal (enable signal) on a carrier having a specific frequency by the portable transmitter, followed by (3) reception of the enable signal via a tunable receiver at the control unit, wherein (4) there is a process of altering the carrier frequency of the coded electromagnetic signals during transmission of the signals in a manner known only to the control unit and to the radio key.

On page 4 of the Office Action, in the discussion of Siedentop, the Examiner refers to column 4 at lines 1 to 10 of Siedentop. There, Siedentop discusses modulation of a signal communicated on a carrier having a known frequency. The altering of the frequency is not addressed. To the contrary, the reference to the resonant circuit 106, 107 is normally understood by a skilled person as teaching a fixed frequency. Siedentop further discusses modulation in column 10 at lines 36-59. Windyka teaches the construction of an antenna suitable for a hopping of the carrier frequency. However, the two references, considered individually and in combination, do not suggest shifts in transmitted frequency in conjunction with corresponding shifts in tuning of a reception band of a receiver, particularly wherein the frequency shift and the reception-band shift are made in response to a common stimulus unknown to the public.

Thereby, the present invention provides for two sources of security, namely, (1) use of encryption and (2) shifting of the carrier frequency to prevent reception by an intruder. This is explained on page 2 of the present specification.

Claim 1, as amended, sets forth the foregoing features of the invention. The cited art, at best, shows only that technology exists to build the invention, but does not discuss the security feature of secretly altering the carrier frequency during transmission, while altering in corresponding fashion, the reception band of a receiver. Accordingly, claim 1 and its dependent claims are believed to be allowable over the teachings of the cited art.

The following additional points of argument are noted also.

Siedentop, in column 10, lines 50-54, in dealing with the application of different carrier frequencies, does not teach that the frequency is altered during signal transmission.

The alteration of a carrier frequency should not be confused with frequency modulation of a signal, the latter being the subject of Siedentop (see column 4, lines 1-10 and column 10, lines 36-59).

Claim 4 refers to the stimulus signal which is sent by the control unit to the portable transmitter. This stimulus signal contains a coded information item which informs the portable transmitter about the manner in which the carrier frequency is to be changed during signal transmission. In response to the stimulus signal the portable transmitter sends an enable signal to the control unit, the carrier frequency of which is altered according to the coded information contained in the stimulus signal.

Siedentop does not disclose a stimulus signal containing a coded information item describing the manner in which a carrier frequency should be changed during signal transmission and does also not disclose that a carrier frequency is altered during signal transmission, in response to such a stimulus signal.

The column 2, lines 12-16 and column 8, lines 49-54 cited by the Office Action in relation with claim 4 (see Office Action page 5), describe solely that a stimulus signal (question code) as

such is transmitted, that the signal is coded and that a coded response signal is generated. Nothing is said that the coded stimulus signal contains an information about how to change a carrier frequency during signal transformation.

Regarding Windyka, since no exchange of coded signals is disclosed, a person skilled in the art could deduce nothing from Windyka to come to a solution according to the amended claim 1.

It is again emphasized that the alteration of a carrier frequency and the tuning of a corresponding reception band of a receiver is not the same as frequency modulation wherein a carrier spectral line might be retained, and the center frequency and bandwidth of a reception channel would remain constant. The amendment to claim 1 makes specific reference to carrier frequency and reception band so as to avoid any confusion as to what is being claimed.

In view of the foregoing analysis, it is urged that the foregoing argument has overcome the rejections under 35 USC 102 and 103 to secure allowable subject matter in the claims.


In the event there are further issues remaining in any respect the Examiner is respectfully requested to telephone attorney to reach agreement to expedite issuance of this application.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Since the present claims set forth the present invention patentably and distinctly, and are not taught by the cited art either taken alone or in combination, this amendment is believed to place this case in condition for allowance and the Examiner is respectfully requested to reconsider the matter, enter this amendment, and to allow all of the claims in this case.

Respectfully submitted,

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CERTIFICATE OF MAILING UNDER 37 CFR SECTION 1.8(a)

I hereby certify that the accompanying Amendment upon Final Rejection is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria VA 22313-1450, on December 2, 2004.

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